

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6SL3244-0SA00-1AA0

ET 200S FC CONTROL UNIT

Used with the applicable SIMATIC ET 200S frequency converter configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens official documentation applicable to 6SL3244-0SA00-1AA0

Description

2.1 General

Overview

This manual describes the differences in the operation of the ET 200S FC (FC = Frequency Converter) in the SIMOTION system compared with operation in the SIMATIC system.

Note

This manual is a supplement to the SIMATIC *ET 200S FC Frequency Converter* Operating Instructions (03/2005 Edition).

This documentation is supplied in electronic form with SIMOTION SCOUT.

Requirements

The following are required for the standard function described in this document:

- SIMOTION SCOUT, V4.1 SP1 or higher
- SIMOTION Kernel, V4.1 SP1 or higher
- ET 200S frequency converter with ICU24, software release V1.02 or higher

Note

The functions associated with the **_ET200S_FC_control** function block can only be used on the ET 200S frequency converter with ICU (order no.: 6SL3244-0SA00-1AA0).

2.2 Product description

ET 200S frequency converter

The ET 200S FC is a modular frequency converter that is completely embedded in the distributed I/O system of the ET 200S.

During generator operation of the connected motor, the ET 200S FC feeds back energy into the supply system.

Function block

The **_ET200S_FC_control** function block is provided for the cyclic communication and the parameter transfer of the ET 200S FC with SIMOTION. This function block is described in this manual.

Note

The **_ET200S_FC_control** function block **cannot** be used to control the ET 200S FC (order no.: 6SL3244-0SA00-1AA1). Standard telegram 1 should be used for this frequency converter.

Functionality

The functionality of the **_ET200S_FC_control** function block and the ET 200S FC is the same as when used in the SIMATIC S7 automation system. There are differences in the execution of the data transfer and the handling of the FB.

Possible applications

The ET 200S FC can be operated in a distributed ET 200S station via PROFIBUS DP on a SIMOTION controller.

Several ET 200S frequency converters can be operated in one ET 200S station. The ET 200S interface module IM 151-1 is used for the connection to PROFIBUS DP.

The following figure shows a distributed configuration with SIMOTION C2xx.

2.3 Installation and connection

You must perform the following steps to be able to operate the ET 200S frequency converter using the SIMOTION system:

1. Install and connect the ET 200S interface module (IM) with the components of the ET 200S FC.
2. Establish the PROFIBUS connection between the IM and the SIMOTION device.
3. Set the PROFIBUS DP node address on the IM.
4. Switch on the terminating resistor at the first and last bus node.

Note

The commissioning of the ET 200S frequency converter can be performed either via

- the STARTER functionality integrated in the SIMOTION SCOUT engineering system (via "Insert single drive"), or
- or the STARTER engineering software.

For a description of commissioning and steps 1 to 4, see the *SIMATIC ET 200S FC Frequency Converter* Operating Instructions (03/2005 Edition).

5. Insert the ET 200S FC into the SIMOTION project (refer to Chapter Inserting the ET 200S frequency converter into a SIMOTION project (Page 13)).
6. Parameterizing the ET 200S FC.
To parameterize the module, go to **HW Config**. Double-click the relevant module to open the **Properties** dialog box. Select the **Parameters** tab to access the parameterization interface. There you can assign parameters for your module.
See the *SIMATIC ET 200S FC Frequency Converter* Operating Instructions (03/2005 Edition).
7. Link the function block to the SIMOTION project (refer to Chapter Integrating the function block in the user project (Page 15)).

2.4 Inserting the ET 200S frequency converter into a SIMOTION project

Requirements

The following requirements must be met:

1. You have created a project in SIMOTION SCOUT and inserted a rack with a SIMOTION device in the hardware configuration.
2. You have configured a PROFIBUS subnet.

Note

Consult the *SIMOTION SCOUT* online help to learn how to create a project and configure a PROFIBUS subnet.

Inserting the frequency converter

1. In SIMOTION SCOUT, open the "User Projects" dialog box with the "Project" > "Open" menu command. In this dialog box, select your project and confirm with "OK".
2. Open **HW Config**.
3. In the "HW Config" window, open the **hardware catalog** with the "View" > "Catalog" menu command.
4. In the hardware catalog, open the "PROFIBUS DP" folder and the "ET 200S" subfolder and select, for example, the **IM 151-1 Standard** interface module (order no.: 6ES7 151-1AA04-0AB0 or follow-on module).
5. Use drag-and-drop to move the "IM 151-1 Standard" interface module onto the PROFIBUS subnet of your SIMOTION device.
The "Properties - PROFIBUS IM 151-1 Standard Interface" dialog box opens. In this dialog box, select the address you set on the IM 151-1 (see *ET 200S Distributed I/O Device Manual*) and confirm your selection with "OK".
The selected IM 151-1 Standard I/O device is inserted into the project.
6. The inserted I/O device still has to be equipped with the following modules: PM-D power module and ET 200S FC frequency converter, consisting of ICU24 closed-loop control module.
Open the "Motor starter" folder and the "PM" subfolder under "IM 151-1 Standard" in the hardware catalog. Select the **PM-D 24VDC** power module.
Insert the frequency converter by selecting the **ICU24** closed-loop control module (order no. 6SL3244-0SA00-1AA0) in the "Frequency converter" folder under "IM151-1 Standard" (order no.: 6ES7 151-1AA04-0AB0) in the hardware catalog.

Note

You can disable or enable diagnostic alarms via parameter p8452 in the ET 200S frequency converter.

7. Save and compile your project.

Parameterization

4.1 Function block _ET200S_FC_control

Task

You can control the ET 200S FC via your user program with the FB **_ET200S_FC_control**.

The FB **_ET200S_FC_control** supports the following functions:

- Drive control:
 - Sending control words
 - Receiving status words
- Diagnostics:
 - Displaying drive faults
 - Acknowledging drive errors
 - Displaying parameterization errors in the data exchange
- Reading and writing of drive parameters

Call (LAD representation)

